Thoughts on the Causation of Insanity.

BY DR. JOHN P. GRAY,

Superintendent of the New York State Lunatic Asylum.

[From the *American Journal of Insanity*, for October, 1872.]

Thoughts on the Causation of Insanity.

BY DR. JOHN P. GRAY,

Superintendent of the New York State Lunatic Asylum.

[From the *American Journal of Insanity*, for October, 1872.]

Thoughts on the Causation of Insanity.*

The human body, for the purposes of life, is a unit of intimately associated organs. Each of its constituent elements contributes its share, and so co-operates by its activity to maintain that complex condition of our being, known as organic or physiological existence. For the normal working of the organism, it is essential that its fundamental elements should be sound and rythmical in action. Nevertheless, each individual organ has a life of its own; not so conspicuous in man as in the lower animals, to which is due the independence of deranged action, or disease, displayed in single organs, without at the same time any visible impairment of the functions of the whole body. Furthermore, each organ is endowed with a certain amount of surplusage, or ability to perform and bear more than is habitually required, and this reserve force, or provision for strain, differs in individuals. To the activity proper to each organ are due the peculiar characteristics of its function, and of the phenomena of its decay or death.

One element may fail or degenerate more readily than another, and reacting on the whole local structure, cause this in its turn, and in a physical way, to originate, in the first place, a local disease, and in the second, a consecutive general disease. The tolerance or reaction to such morbid disorders on the part of the organ-

* Read before the New York State Medical Society at its Annual Meeting, February, 1872, and also before the Association of Medical Superintendents of American Institutions for the Insane, at its Annual Meeting held in Madison, Wis., June, 1872.

ism, as a unit, differs according to the structural elements involved. Hence, some organs are denominated vital, because their lesion is more important as being capable of originating more or less profound general disturbance or even death. But even the structure of these vital organs may occasionally be deeply involved by disease or accident without determining any material disturbance in the natural operations of the body.

Necrobiosis, a term happily introduced by Virchow, may and does often take place in the brain to an extensive degree without any apparent sign of its existence in the mentality of the individual. Thus, through the same unknown process, the lungs, kidneys, &c., may undergo considerable degeneracy of their structure without producing any conspicuous constitutional disturbance. Let it be understood, however, that in noticing this well-acknowledged fact, we do not pretend to assert that under such circumstances life is normally carried on, for so far, the fact only proves that we fail to appreciate the abnormal phenomena attending the organic changes here in question.

In the celebrated case of Phineas Gage, reported by Dr. Henry I. Bigelow, (*American Journal Medical Sciences*, July, 1856,) the patient, by the premature discharge of a blast, had a *tamping-iron*, with which he was ramming down the powder, driven through the head from below upwards. The bar, three and a half feet long, and weighing thirteen pounds, entered at the ramus of the left jaw, passing under the zygomatic arch, behind the eye, through the anterior part of the left hemisphere, and across the corpus callosum and the margin of the right hemisphere, involving the loss of the whole central part of the left anterior lobe, together with extensive laceration of the spheroidal, or middle lobe, the right central lobe, the falx and the longitudinal sinus. The patient not only made a perfect recovery in a physical sense, but by every known test that was applied either subjectively or objectively to his mind, failed to exhibit the slightest impairment of any intellectual faculty. Prof. John Ordronaux, who saw Gage shortly after the accident

and before he was under the care of Dr. Bigelow, says the brain could be perceived pulsating in very nearly the original place of the anterior fontannelle, and though he had lost so much brain substance, and a compress of tea-lead was kept upon the wound to prevent the extrusion of the brain, he had lost nothing of mental power or sagacity, and was entirely clear in all his mental processes.*

Abscess of the brain may exist, or portions of it may be carried away by gunshot, or other injuries, and yet no perceptible difference be observed in the mentality of the individual. Portions of the lungs may be destroyed and what remains still be able to carry on the physiological processes of the organ so as to meet all the demands upon it, in its connection with the whole body. Indeed, it may be said that few persons are in uniformly sound health. In a really sound organism each structural element is not only perfect, but in harmonious correspondence with the organic operations of every other part.

The ordinary condition of mankind is that of variability in the anatomical structure and physiological power of parts. "Infirmity, or instability of element, of some parts," (to use the phrase of Prof. Maudsley,) "is also apt to exist as a congenital state."

As a predisposing or inciting cause of disease, constitutional defects, or instability of element, stand pre-eminent. If we see a narrow flat chest in a large organism, and find that this individual is subject to a cough on slight atmospheric changes, we are apt to inquire whether his ancestors have died of consumption, and find the inquiry usually answered in the

*See also case of young Galli; reported by Dr. Edwin Hutchinson, of Utica, in the AMERICAN JOURNAL OF INSANITY, volume 25, page 256. A case of compound fracture of the skull, at the anterior portion of the right parietal bone, loss of brain substance at the time, and subsequently by abscess and recovery.

affirmative. In this instance we have natural infirmity and instability of lung element, and they lead us to recognize a tubercular diathesis, and prognosticate consumption under unfavorable circumstances of life. And as we know, the poorly-housed and poorly-fed, of this class of people, almost always die prematurely of tubercular disease.*

The doctrine of heredity of the nervous tissue rests upon the same foundation of "natural infirmity and instability of nerve element." In regard to insanity, this question of heredity is of the highest possible import. A distinguished writer (Maudsley) says, "the insane neurosis which the child inherits in consequence of its parent's insanity, is as surely a defect of physical nature as is the epileptic neurosis to which it is so closely allied." This author also says in regard to hereditary neurosis: "Past all question it is the most important element in the causation of insanity."

He further says: "We have not to deal with disease of a metaphysical entity, which the method of inductive inquiry can not reach, nor the resources of the medical art touch, but with disease of the nervous system, disclosing itself by physical and mental symptoms." * * * * "Mental disorders are neither more nor less than nervous disorders in which the mental symptoms predominate; and their entire separation from other nervous diseases has been a sad hindrance to progress." "It is quite true that when we have referred all the cases of insanity that we can to bodily causes, and grouped them according to their characteristic bodily and mental features, there will remain cases which we can not refer to any recognizable bodily cause or connect

---

* The pulmonary manifestations of the diathesis are here obvious; not so, however, if they shall have mainly involved the nervous system; the mental state, the propensities and tendencies, the cerebral premonitions which herald a threatening outbreak of insanity in individuals tainted with a diathesis, whether inherited or acquired, at any age of life, is a subject still open for research, and a rich mine of evidence for the physical causation of insanity.

with any bodily disease, and which we must be content to describe as *idiopathic*. The explanation of these cases we shall probably discover ultimately in the influence of the hereditary neurosis, and in the peculiarities of individual temperament."

In accepting this explanation, we must, while admitting the probability of hereditary neurosis, not lose sight of the fact that insanity itself is a special nervous disorder, and may in individual cases originate in some still unknown morbid process in the nerve tissue.

It is further evident, that we are every day discovering structural degenerations of brain tissue, which throw more and more light on causation, and constantly narrow down the class of so-called idiopathic cases, the etiological history of which gives little force to, if it does not contradict, the idea of an idiopathic origin in any case. The researches of J. Lockhart Clark into the pathology of tetanus, should make us guarded in negative conclusions, and in the use of such vague terms as *idiopathic* in speaking of diseases.

Prof. Maudsley, speaking on the subject of physical causation uses this emphatic language: "I am tempted sometimes to think that no person goes mad, save from palpable physical causes, who does not show more or less plainly, by his gait, manner, gestures, habits of thought, feeling and action that he is predestined to go mad." Again, he says in support of this physical origin of insanity: "It can not be in the normal order of events that a healthy organism should be unable to bear ordinary mental trials; much less a natural physiological function such as the evolution of puberty, the puerperal state, or the climacteric change."

Heredity is a condition which originates morbid processes of the most manifest physical nature. While I do not entertain as decided an opinion as Dr. Maudsley in regard to the extent of the insane neurosis, (a

term which he uses instead of the old expression hereditary predisposition,) I fully believe, what he is "tempted sometimes to think," that insanity occurs only as the result of physical causation—that a necessary antecedent to madness is a disordered physical state of the brain—that it never occurs in a person of sound brain. In 1868, two years before the publication of Maudsley's work, from which I quote, in an annual address before the State Medical Society, I said: "Insanity is now generally recognized as a bodily disease, a disorder of the brain, and must take its place in the category of the neuroses, and is in fact the highest expression of this class."

My predecessor, Dr. Brigham, while declaring that it was his opinion that moral causes predominated in the development of insanity, nevertheless qualified this declaration in the following words: "The phrase 'derangement of mind' conveys an erroneous idea, for such derangement is only a symptom of disease in the head, and is not the primary affection. It is true that moral and mental causes may produce insanity, but they produce it by first occasioning either functional or organic disease of the brain. On examining the heads of those who die insane, some disease of the brain or its appendages is generally found." He argues "that the brain, considered as a whole, is the instrument by which the mind operates," and after referring to the "belief in the dependence of the mind upon a sound state of the body as forced upon us by almost daily occurrences;" and giving some illustrations, he adds: "Insanity furnishes farther evidence that the brain is the organ by which the mind acts, for this is not a disease of the immaterial mind itself, but of the brain, and often resulting from some injury. Such a diseased state of the organ of the mind, of the very instrument of thought,

or of some part of it, deranges the intellectual faculties just as a diseased state of the stomach deranges digestion. The immortal and immaterial mind is, in itself, surely, incapable of disease, of decay, and derangement; but being allied to a material organ, upon which it is entirely dependent for its manifestations upon earth, these manifestations are suspended or disordered when this organ is diseased." "If the mind could be deranged independently of any bodily disease, such a possibility would tend to destroy the hope of immortality, which we gain from reason: for that which is capable of disease and decay must die. Besides, it would be natural to expect that mere mental derangement might be cured by reasoning and by appeals to the understanding. But attempts to restore the mind in this manner generally prove useless, and are often injurious."

Prof. Maudsley claims that the insane neurosis is in fact a latent madness—a sort of morbid elemental factor inherent in the physical organization; that this condition of nerve element may not only break out into insanity, but that it may in the offspring appear in the form of other neuroses, as epilepsy, neuralgia, &c., and adds: "If we meet in practice with a case of violent neuralgia occurring from time to time, without our being able to assign any morbid cause for it, we may predicate the existence of insanity in the family with almost as much confidence as if our patient were actually insane." He speaks in this connection also of a "well-known law by which a diseased organism strives, as it were, to return to a healthy type, not only in the individual, but through generations, and so occasions a tendency in diseases to die out unless freshly lighted up." If it be true that there is such an inherent organic law, is not this *the* true physiological law, and the insane neurosis only an accidental, or pathological, and

not a physiological factor? Should there not therefore be, under ordinary influences of life, a stronger tendency to return to a healthy than to degenerate into an unhealthy type, as a law of nature? In this contest, which would be most likely to succeed, the law of nature for her preservation, or the law of degeneracy for her destruction? We think Prof. Maudsley admits the former in the very words of his proposition.

The important practical consideration is not to show the biological process by which certain agencies act on the brain to induce disease of that organ; to show that emotion, for instance, increases or decreases the circulation in the brain. This abstruse influence, which belongs to the mysterious inter-relation of mind and body may always evade research. The fact we know, but the primary cause, or just how mind influences matter, we may never know. To say that the mind influences physiological states, is to announce a belief in the possible predominance of the spiritual being over the material structure through which it manifests its existence in the world. This being, in its phenomena, as we observe them, is characterized by spontaneity and by volitional power; the power to originate, to will and to do. The body constantly obeys its dictates, whether in accordance with its preservation and seeming comfort, or in violation of laws of preservation. The body is constantly under its guidance. This is the case whether in a state of sanity or of insanity. Every day we see that grief brings tears; that anger and revenge have expression in the face; that joy has its corresponding physical expression; that habitual mental cultivation will change the physiognomic expression. Now the study of all these phenomena belongs to physiology and psychology, or the relation of mind and body in health. When we have enumerated all the passions, grief, joy, anger, pleasure,

revenge, gratitude, hope, fear, and the like, we have only characterized what we see springing from the human heart in the natural condition of man. When man is insane we find nothing more. Insanity introduces nothing new in the way of mental characteristics. To show that grief, jealousy, disappointment, love, and the like, cause insanity, we must add some factor not found in man in his ordinary normal state. These qualities, or emotions, or passions, as they are variously termed, are always in him, and constitute the evidence that he exists as man.

It will not do to say, that excessive grief, which is a comparative expression as between individuals, because grief influences the physical organization normally, will therefore induce a diseased condition of that organization. Grief may be excessive, intense, prolonged, and yet the person remain sane: so of the other passions. Now what may grief do to cause a departure from health? Can grief cause a mental change, independent of bodily change, and thus under its stress can the mind be overthrown? While the bodily functions are healthfully performed, and the brain properly nourished, and due rest is secured, can any degree of grief cause insanity? Is it not only when the grief is so absorbing as to withdraw attention from the due care of the body, and the brain is consequently ill-nourished and ill-rested that insanity supervenes? Only when the moral cause has induced that degree of functional activity and exhaustion, the necessary effect of which is to transform the physiological action into a pathological state, does insanity ensue, and then through the medium of structural changes. The factor introduced therefore, is disordered function, or disease of the brain.

So of jealousy, and so of excitement in business, or

politics, or religion. These are in one sense moral causes, but as moral influences alone, they are insufficient to induce insanity. As remarked by Dr. Brigham, they must *first* induce physical disease. Or, in the words of Griesinger, the moral cause is potent when "it has become fixed through the mediation of abnormal functional phenomena."

Whatever may be the remote or inciting cause of insanity; however strongly circumstances may tend to harass and weary and depress the mind, insanity will result only as a consequence of a disordered state of the brain. We may enumerate a wide range of what are denominated predisposing causes, such as heredity, sex, age, nativity, social position, education, loss of friends, of property or position, anger, disappointment in love, and yet when we have done all this, we have only shown that in connection with the history of insane persons, we have found facts and circumstances which are also of common occurrence in the lives of those who are not insane. For this reason some professional men are disposed to deny the force of these agencies as predisposing causes. It is a pertinent question, what value should we give to them, and what relation they sustain as elements of causation in producing insanity? It is true as Dr. Maudsley well says: "It can not be in the normal order of events that a healthy organism should be unable to bear ordinary mental trials-much less a natural physiological function, such as the evolution of puberty, the puerperal state, or the climacteric change. When, therefore, the strain of grief or one of these physiological conditions becomes the occasion of an outburst of insanity, we must look for the root of the evil in some natural infirmity or instability of nerve element."

"Not until we apply ourselves earnestly to an exact

observation and discrimination of the mental and bodily conditions, which coöperate in the causation and are manifested in the symptoms of the manifold varieties of insanity, shall we render more precise and satisfactory our knowledge of its causes, its classification and its treatment." "How unscientific it appears, when we reflect, to enumerate, as is commonly done, sex and age, among its predisposing causes. No one goes mad because he or she happens to be a man or a woman, but because to each sex, and at certain ages, there occur special physiological changes which are apt to run into pathological effects in persons predisposed to nervous disorders. How often it happens that a moral cause of insanity is sought and falsely found in a state of mind such as grief or jealousy, which is really but an early symptom of the disease."

The remark of Prof. Maudsley that it is unscientific to speak of age and sex as predisposing causes is true; yet it is not to be supposed, that Griesinger or any other writer to whom he refers, intended, in speaking of these as causes, anything more than Prof. Maudsley asserts, that at certain ages, as puberty and the climacteric periods, of constitutional evolution, the organism is under conditions which predispose to pathological states, from which insanity may result more readily or under the pressure of less unfavorable circumstances. Maudsley admits this fully when he says: "The great mental revolution which occurs at puberty, may go beyond its physiological limits, in some instances, and become pathological."

Griesinger, in speaking of emotional influence in the causation of insanity, says "it may be *direct* or *indirect*. In the first case, the emotions, particularly the passed-off psychical phenomena, are the *immediate* originators of the mental disease, inasmuch as they produce a state

of intense irritation of the brain which now continues." "More frequently, however, the insanity originates *indirectly* through the medium of a pathological process from the psychical cause, inasmuch as they in the first place bring about further deviations from the normal organic processes in other parts from which the cerebral disease proceeds, as a secondary result. If we consider the fact previously spoken of, that the emotions ordinarily disturb, sympathetically, the functions of the organs of circulation, respiration, digestion, and of the blood formation, we will easily understand how these, when long continued or very violent, must cause slight disorders of these functions, and those individuals are most easily affected in whom (owing to congenital or acquired disposition) emotions are most easily excited. Very frequently the cerebral disease commences when after long oscillation some serious pathological change has gradually arisen in some other organ." "It is easily comprehensible that those consequences of the emotions are most frequent and dangerous in the period of life in which the organism is subjected to the greatest expenditure of force, in order to its proper development and further growth, and in which it generally is most capable of disease, viz.: at the period of puberty, during child-birth, the climacteric period."

From this quotation, it is evident that even in these cases in which Griesinger speaks of moral causation, or the direct influence of emotion, he admits the doctrine of a physical pathological change as the only adequate causation, for it is only when the disturbance of the circulation or other influences induce "intense irritation of the brain," "and this irritation continues," that insanity results. This expression, "intense irritation," by no means explains the true nature of the morbid change in the nerve tissue, which constitutes the ele-

mental pathological condition of the brain in which insanity arises—however it fully admits the doctrine that the potential cause must be physical. If further evidence were necessary to show the true view of this distinguished alienist, we have it in his own words, in his solution of the manner in which the predisposing moral causes influence the physical system.

"It is by no means rare after some untoward event which immediately caused disturbance of the cerebral processes, to see the individual become again mentally quiet; but he begins to feel ill, to suffer in various other organs, and it is only after years of constantly increasing deterioration of the constitution, owing to the development of anæmia, or other chronic disease, that mental disease is established."

He says, that under such circumstances, emaciation, indigestion, sleeplessness, palpitation, cough, cerebral congestions, nervousness and hypochondria, neuralgias, menstrual irregularities, and various anomalies of sensibility supervene. "Tuberculosis, chronic heart diseases, are now awakened, or rapidly aggravated, and out of these pathological mediators between first causes and ultimate results, mental diseases proper are finally established."

The question of causation of insanity, while of great interest to the public generally, must be especially so to the medical profession. The wide range of predisposing influences, assigned even by those who have carefully observed the onset and progress of this disease, and given their life-long service to its treatment serves to throw around the subject much of perplexity and doubt. Even some of the ablest superintendents of institutions, and among them, Dr. Ray, have not tabulated or attempted to put into any form, the varying and often remote agencies, which have seemed to exert

a predisposing influence in developing insanity. Is not this a tacit admission of their want of confidence in moral influences as the true and really exciting causes of the disease? Under such circumstances it is not surprising that the general practitioner should feel embarrassed as to what constitutes the inciting and what the exciting cause of the disease. This predisposing or inciting influence of moral causes is not exceptional with the brain, for we have manifest examples of the influence of grief and other depressing emotions over other organs, the stomach, bowels, kidneys. All teachings of medical science declare disease to be a morbid process—a changed physiological state—and if insanity is to be considered a condition consistent with sound physical health, how is it a disease? If this could be admitted, the logical conclusion would be that this was a disease of the mind itself. Some, indeed, hold that the mind, or spiritual being, is itself in some way diseased; though it is more generally claimed that it can not be the subject of disease. Others declare the mind to be mere force or secretion; an essence which results from the physical changes of the structure.

The exciting causes of insanity, as far as we are able to determine, are physical; that is, no moral or intellectual operations of the mind induce insanity apart from a physical lesion. From a circulatory disturbance in the supply of blood to the brain, induced through irregular or excessive use of the organ, or under mental emotions, there may be initiated temporary or even permanent cerebral disease, whereas it is equally true that from an altered chemical condition of the fluids not yet adequately determined, and which may have been superinduced during peculiar natural periods, as gestation, lactation, menstruation in some distant organ, such as the uterus, kidneys, lungs, we may have like results.

If the mind could so contemplate its own operations, its intellectual conceptions, its moral ideas, its emotional states, as to pass into a state of insanity, as it passes into a state of joy or grief, or jealousy, then insanity is no disease. The mind merely overthrows itself by excessive or erratic action. Under the same interpretation of phenomena, dementia would be simply the generation of less force. But assuming that mind is force thus generated, how is the force or mind to become deranged, or stopped, while the machine is in order which creates it? How is any external cause to operate on this force, if it is simply a product of nerve changes?

Perhaps the best illustration of insanity without apparent dependence upon physical causation, is what is called impulsive insanity. Prof. Maudsley, in attempting an explanation of this form, makes this statement, in which he has to admit its physical origin. He says:

"A desperate impulse to commit suicide or homicide overpowers and takes prisoner the reason. * * * The impulse is truly a convulsive idea, springing from a morbid condition of nerve element, and is strictly comparable with an epileptic convulsion." He represents the insane person as deploring "the terrible impulse," and adds "he is fully conscious of its nature and struggles in vain against it. His reason is no further affected than in having lost power to control, or having become the slave of the morbid and convulsive impulse."

Now if such impulses exist and are organic, if they are convulsive ideas, springing from a morbid condition of nerve element which overthrows and enslaves the reason, the cause and the disease must necessarily be physical. The mind is not even concerned in it, except in hopeless and helpless resistance. It is in one word, a mere reflex action. This is, to our mind, no solution of homicidal or suicidal tendencies in insanity, and we submit is at variance with any sound views of mental philosophy. It

is entirely inconsistent with our experience and observation for many years with a large number of this class of patients. This is a mere assertion, and is the false basis upon which what is called transitory mania, or impulsive insanity, rests. The acceptance of such a doctrine of convulsive ideas by the profession generally, would be opening a door through which every criminal could pass unwhipt of justice. It is a happy phrase for lawyers, and for a class of experts in criminal cases, in which the "enslavement of reason" and the criminal act are conjoined and separated at so nice and brief an interval, as to be well characterized as convulsive. In the language of Devergie, one of the most competent authorities on this question,

"There does not exist, then, transitory insanity in the pure acceptation of the term. Transitory insanity, like all other forms of insanity, has its prodromata, its remote and proximate symptoms, which the world apprehends not, and to which it does not attach sufficient importance; and which sooner or later explain themselves by the delirious act, the act recognized by every one, often prejudicial, and at times of a criminal character. And if, with regard to transitory insanity, we ask where reason ends and mental unsoundness commences, although the question can not be answered, we say that it is necesary first to establish a distinction between the *delirium of insanity* and insanity itself. The explosion of delirium occurs long after the invasion of insanity, and it shows itself in a hasty and sudden manner."—*Psycholog. Jour.*, vol. 12, p. 545.

The history of the classification of insanity shows the tendency, under continued observation and experience, to adopt the idea of physical exciting causation. The fact is, the progress of medical science has compelled this, under the clinical study of the neuroses which has received marked attention during the past few years. The earlier classification was based simply on the character of the mental phenomena observed.

This was undoubtedly an important step toward the systematic study of the disease. The general division into mania, melancholia, dementia and idiocy, were the generic forms, under which were grouped all the various manifestions of mental disturbance and defect.

While this division was perhaps adequate for the purposes of Medical Jurisprudence to determine the question of responsibility, it was found too general for scientific classification. It was found, for instance, that these forms often shaded into each other, that in the same individual melancholia and mania alternated; that persons, admitted into asylums in apparent dementia, frequently passed into a condition of maniacal excitement, and that in the progress of all cases where recovery did not occur, dementia was the final condition. However all attempts to improve a system of classification by a subdivision of these original forms were still unsatisfactory.

A second classification, also suggested by the phenomena of disease was based upon its physical origin, and this has been steadily gaining ground. In 1863, Dr. Skae, of Edinburgh Royal Asylum, proposed a classification before the Medico-Psychological Association, based on the bodily causes and natural history of the disease; and in 1869, a committee of that association recommended this classification, and also one proposed by an inter-national congress of alienists, held in Paris in 1867. The latter proposed to arrange cases according to the causation, as for instance: Insanity of pregnancy, of childbirth, of lactation, climacteric, from uterine disorder, tuberculosis, masturbation, alcoholism, post febrile, and the like. The method of classification according to the pathological cause, is both clinical and scientific, and conforms to that adopted in the study and treatment of other diseases. This

is indeed the only classification under which this form of nervous disorder can be studied with any hope of success, either in respect to its etiology or treatment.

To the mind of a medical man the expressions mania, melancholia, dementia, convey no idea whatever of the physical condition; they merely suggest a state of mental excitement, or depression, or enfeeblement. To say that a patient has lost property or friends, or has attended some religious revival, certainly gives him no clew as to the condition of his bodily organism, and without an inquiry into this no suggestion of rational medical treatment could arise. If nothing more was demanded it would make no difference whether the patient were placed in the hands of a doctor, a priest, or a jailor. If with the mental phenomena above described and the moral causes suggested, we learn that he is sick, broken down in general health, sleepless from an anæmic brain, or that he has phthisis, or enfeebled or impaired digestion or other recognized functional or organic disturbance, then the case is brought within the sphere of medical investigation and the resources of our art. Some writers on this subject, chiefly those who are only theoretical, and have had no practical experience in the observation of the disease, only confuse the reader and the young student by presenting the former classification as a metaphysical one, and the latter as materialistic. Nothing could be more illogical, as metaphysics and materialism have nothing whatever to do with the question. The former, as has been stated, is merely a classification based on the mental phenomena, and the latter on the physical. The error into which these writers fall is due to a want of recognition of the fact that insanity is simply a disease, and like all other neuroses has physical and psychical symptoms. The mere fact that the psychical symptoms are so marked and pronounced in

insanity, is due to its cerebral connection. In cases o fever we should not think of classifying according to the nature of the delirium, as we recognize that phenomenon as a mere symptom of disturbance of cerebral circulation. While the psychical classification is understood simply as set forth, no harm can result from its use. It is only when it carries with it the false idea of a disease of the mind itself, that it misleads those who accept it.

We have always used the simple classification of Pinel into mania, melancholia, dementia and idiocy, but dividing mania into the forms of acute, sub-acute, chronic and paroxysmal; considering this preferable to one which is based upon the special form of delusions or the habits developed in the course of the disease. If we should adopt any change from this simple classification, so well understood, it would be one conforming to the physical character and history of the disease as revealed in its pathological causation. For many years we have attempted to conform in the tabulation of causes to the development of this latter idea. We have deemed the study of the true physical causation as of far higher moment, however, than a mere nomenclature.

As to predisposing causes, they should not be confounded in the mind of the physician with the exciting, or potential physical change with which he has to deal as a matter of treatment. The former are questions of social science, hygiene and prophylactic, or preventive medicine, and can only be investigated in relation to communities and not as to individuals. As Griesinger says: "Their mode of action being quite uninvestigable," these remote causes and their relations I shall not here attempt to discuss. Among them are enumerated, nationality, climate, seasons, educa-

tion, social position, vocation, habits of life, vices, crimes. Among special predisposing causes we have already referred to heredity, sex and age.

The physical or directly exciting causes are those which immediately concern the physician in his relation to his patients. He must in any individual case, it is true, take into consideration all the predisposing or inciting influences as well as anything which has combined to produce the lesion or lesions.

The real study of causation is the study of disease in its accepted and legitimate signification. In the words of Griesinger: "Even the theory of insanity can not be understood without a full knowledge of its causes and of its mode of progress in individual cases: therefore, the etiological questions are the most important in the whole range of mental therapeutics."